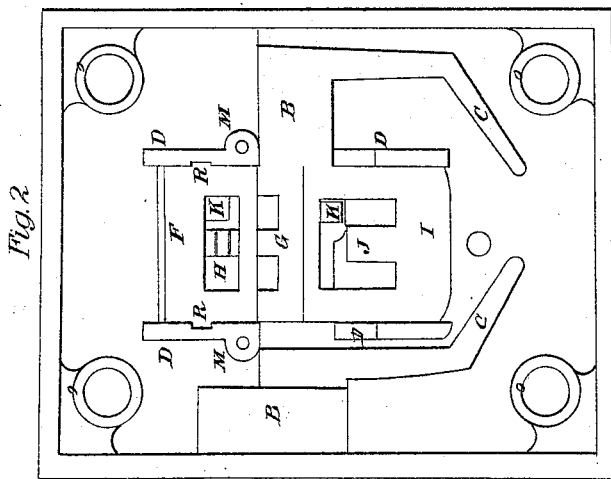
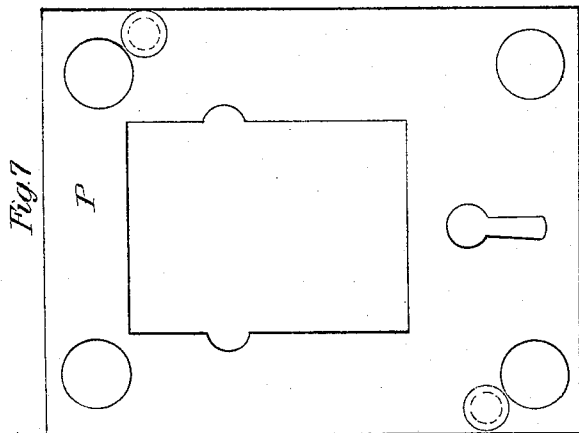
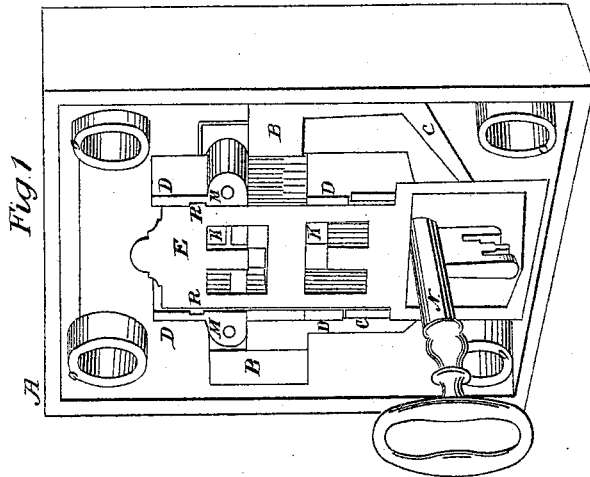


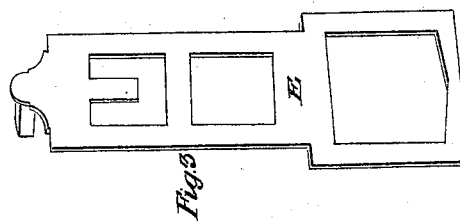
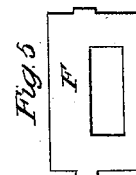
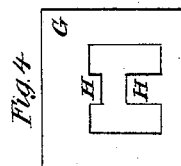
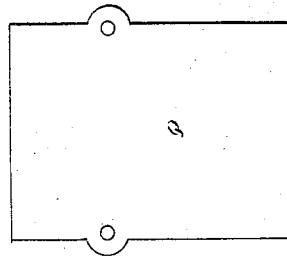
*W. E. Woodbridge,*  
*Lock.*

*N<sup>o</sup> 4,630.*

*Patented July 14, 1846.*



*Fig 8*



# UNITED STATES PATENT OFFICE.

W. E. WOODBRIDGE, OF NEW YORK, N. Y.

## LOCK FOR DOORS, &c.

Specification of Letters Patent No. 4,630, dated July 14, 1846.

*To all whom it may concern:*

Be it known that I, W. E. WOODBRIDGE, of the city, county, and State of New York, have invented a new and Improved Safe-Lock, which I have entitled "Woodbridge's Safety-Lock;" and I do hereby declare that the following is a full and exact description of the same.

The nature of my invention consists in the form and arrangement of certain tumblers, whose number is not essential, say seventeen, with (eight) washers, to alternate between the upper or check tumblers. These tumblers are made of steel, or any other kind of metal as may be thought best. The seventeenth or down tumbler, acts as a cap to the others, which are arranged in two sets of eight each, and extends over the whole length of them and down to the base of the lock. On the upper and back side of this tumbler is a pin, which extends across the top of the eight upper or check tumblers, so that when the key is turned in the lock, after throwing the bolt, and to withdraw it, one of the bits on the key, acting on a lower section of the tumbler, forces it down, and with it, the eight check tumblers which had been raised to admit of the passage of the bolt. These two sets of tumblers are called the check tumblers, and the interposed tumblers, and are secured between two supporters, or side pieces, so that they cannot get out of their places. The lower eight tumblers are about one and a half inches square, having a section cut out of each of them of about one quarter of an inch wide, and, one-eighth of an inch from the upper edge, and three-eighths of an inch from the sides, leaving a tongue piece in the center of about three-eighths of an inch. This particular size is not important, except in a lock as represented in the drawings, larger or smaller locks requiring different sizes, the form being preserved. The width of these tongue pieces is essential, and differs from the tongue pieces of the check tumblers, (to be described hereafter) in being one-eighth of an inch wider, and of a uniform length. The object of this difference in the width of the interposed tumblers tongue pieces, is that when the bolt has been projected forward, and the key withdrawn, any attempts to move the bolt back, brings the lower stump on the bolt over the left edges of the interposing tumbler tongue pieces, about the sixteenth of an inch, and thereby prevent-

ing their being raised, so as to raise the check tumblers, or the possibility of getting at them to relieve the upper stump on the bolt to throw it back, by any other instrument than a key belonging to the lock.

The upper eight tumblers or check tumblers, are about the same size as the lower or interposed tumblers, each having a section cut out somewhat similar to that cut out of the interposing tumblers, except that there are two tongue pieces. These tongue pieces are about one quarter of an inch wide, and of irregular lengths, corresponding with the bits on the key, and designed as checks to the upper stump on the bolt, when drawn down after its passage. Between each of these eight check tumblers, are thin metal washers, about one and a half inches long, and three quarters of an inch wide, having a section cut out of them sufficiently long and wide to admit the upper stump on the bolt to pass freely, when shot outward or inward. On the ends of each of these washers are two shoulder pieces to fit into a slot or groove cut in the sides of the supporters of the tumblers, so as to keep them from getting out of their places. Into these cut sections of the interposing and check tumblers, and washers, two stumps attached to the bolt are worked from one side to the other of the tongue pieces in the tumblers, when the bolt is projected forward or backward. On the lower side of the bolt, are two arms, the lower ends bent inward, and extending down near the base of the lock, so as to be acted upon by a bit on the key in shooting it forward or backward.

But more particularly to describe the parts, to enable other skilled in the art to make and use my invention, reference will be made to the accompanying drawings.

Letters A and A of Figures 1 and 2 represent the frame of an ordinary lock. B, B, and B, B, the bolt. C, C, and C, C, arms attached to the bolt and extending down to near base of the lock, having their lower ends bent inward so as to be acted on by the key. D, D, D, D, and D, D, D, D, supporters to the tumblers, to prevent them getting out of their places. E and E, Figs. 1 and 3 down tumbler, the lower section of which extending down to the base of the lock is acted on by the key after having thrown the bolt either backward or forward to restore the check tumblers to their original position, (as now represented in the

drawing.) F, and F, Figs. 2 and 5, washers and shoulder pieces to fit in the slots or grooves R, R, to prevent their getting out of their places. G and G, Figs. 2 and 4, 5 checks tumblers. H, H, and H, H, Figs. 2 and 4, tongue pieces to check tumblers. I and I Figs. 2 and 6, interposed tumblers. J and J, tongue pieces to interposed tumblers. K, K, and K, K, Figs. 1 and 2, upper and lower stumps on the bolt, which 10 when the check tumblers are raised and the bolt is projected forward change their places from the right side of the tongue pieces, (as now represented in the drawings) to 15 the left side, when the check tumblers are again returned to their original places by the action of the key on the lower section of the down tumbler E. The size of these stumps are made with reference to the cut 20 sections in the tumblers, so as to admit of their passing freely to the left or right of the tongue pieces, when the bolt is being projected outward or inward.

L, Fig. 3, is a pin at the back of the down 25 tumbler E, to draw down the check tumblers after the passage of the bolt as described above. M, M, and M, M, see Figs. 1 and 2, screw holes in the sides of the tumbler supporters D, D, for screws to retain 30 in its place the tumbler cap plate. N, Fig. 1, key, showing the bits on it to work the tumblers and bolt. O, O, O, O, and O, O, O, O, Figs. 1 and 2, bolt holes to secure the lock to the door. P, Fig. 7, back plate to the 35 lock and showing the bolt, screw and key holes. Q, Fig. 8, cap plate to the tumblers.

R, R and R R, Figs. 1 and 2 slots or grooves, in the sides of the tumbler supporters, for the shoulder pieces on the washers to fit in so as to prevent their getting out of their 40 places.

What I claim and wish to secure by Letters Patent is:

1. The interposing of a set of tumblers substantially as herein described, between 45 ordinary check tumblers and the key, in such a manner that when acted on by the key, they shall raise their corresponding check tumblers to their proper height; and having tongues so related to a stump at- 50 tached to the lower side of the bolt, that they, (the interposed tumblers) must descend, after the full action of the key upon them, in order to allow either the bolt to pass, or the upper stump of the bolt to touch 55 the tongues of the check tumblers; which arrangement also prevents the motion of the interposed tumblers when, as in an attempt to pick the lock, the upper stump is in contact with the tongues of the check tum- 60 blers.

2. The down tumbler, as arranged with reference to the tumblers so as to dispense with the use of springs or other parts to re- 65 turn the check tumblers to their original position after projecting the bolt either outward or inward.

W. E. WOODBRIDGE.

Witnesses:

E. H. ROUSE,  
CHARLES L. BARRETT.